

REMARKS

Claims 1-3 and 6 are all the claims pending in the application.

The amendments to the specification are made to identify trademarked products.

The claims have been amended as described more fully below. No new matter is added and entry of the Amendments is requested, respectfully.

A) Claim Rejections - 35 U.S.C. § 101

1. Claims 1 and 2 were rejected under 35 U.S.C. § 101 because the claimed invention allegedly was directed to non-statutory subject matter. The Examiner stated that the peptides of formulae (I) and (II) are indicated by the specification to be products of nature.

This rejection has been overcome by amending claim 1 to recite that the compounds are isolated, as supported, for example, by the specification at page 9, lines 5 et seq.

2. Claim 5 was rejected under 35 U.S.C. § 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process.

This rejection has been mooted by canceling claim 5.

B) Claim Objections

1. Claims 2 and 4 were objected to under 37 C.F.R. § 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim.

The Examiner asserted that claim 2 does not further limit claim 1, as the peptides of claim 1 inherently have the properties identified in claim 2.

Applicants assert, respectfully, that the Examiner's position is incorrect. Specifically, the paragraph bridging pages 10 and 11 of the specification states that since the compound of the present invention has an asymmetric carbon atom and a double bond, stereoisomers and geometrical isomers are present. Thus, claim 1 is broader than claim 2 in that claim 1 includes stereoisomers in addition to those recited in claim 2, and claim 1 also includes geometrical isomers. Accordingly, the Examiner is requested to reconsider and remove this objection.

2. The Examiner asserted that claim 4 does not further limit claim 3, as the pharmaceutical composition of claim 3 inherently is an anti-tumor agent.

This objection has been mooted by canceling claim 4.

3. The Examiner objected to the language of claim 5 (*sic.*, claim 6) for reciting a method twice.

In response, claim 6 has been editorially amended to delete one occurrence of reciting a method.

C) Claim Rejections - 35 U.S.C. § 112, second paragraph

Claims 1-6 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

1. The Examiner asserted that the phrase "represented by the formula..." in claim 1 was indefinite because it is not clear whether compounds other than those of the formulae (I) and (II) are included within the claim. The Examiner appeared to suggest replacing the phrase "represented by" with the word "of."

Applicants respectfully submit that the claim is clear as written. However, in order to further prosecution, claim 1 has been amended as suggested by the Examiner.

2. Examiner asserted that claim 5 is indefinite because it claims a use but does not set forth any steps involved in the method or process.

Claim 5 has been canceled.

3. The Examiner rejected claim 6 because it allegedly does not require that the compounds be administered specifically for treating cancer.

In response, the claim has been editorially amended to more clearly indicate that the compounds are being administered to treat cancer.

D) Claim Rejections - 35 U.S.C. § 102

Claims 1, 3, 4 and 5 were rejected under 35 U.S.C. § 102(e) as being anticipated by Nagai (U.S. Patent No. 6,670,326 B1 and PTO 1449 2/25/2005).

According to the Examiner, Nagai teach depsipeptides that are isolated from the same source, *Pseudomonas* sp. Q71576, and by the same method as the compounds of formulae (I) and (II) of the present claims. Further, according to the Examiner, Nagai teach that the depsipeptides have anti-tumor activity. Accordingly, the Examiner asserts that Nagai teach isolation of depsipeptides of the formulae (I) and (II).

This rejection is traversed, respectfully, because the compounds of the present invention were not obtained by Nagai. More specifically, the culture media used in the present invention is different from that used by Nagai. Based on the use of a different media, the present invention

achieved isolation of depsipeptides Q and R, which were not obtained by Nagai by fermentation of the same microorganism.

For inherent anticipation, the reference must necessarily disclose the same invention.

However, the method of isolating compounds A, B and C as set forth in example 1 at column 7 of Nagai is different in several respects from the methods of isolating the compounds Q and R according to example 1 and example 2 at pages 15-17 of the present specification. For example, the seed culture media are different and compounds A-C are isolated directly from the supernatant whereas compounds Q and R are isolated from a supernatant that has been treated to adjust the pH. Furthermore, the compounds of Nagai are isolated under different chromatography conditions than are compounds Q and R. Because of the differences in the methods of isolation of the compounds, Nagai do not necessarily isolate compounds Q and/or R.

In view of the above remarks, the Examiner is requested to reconsider and remove this rejection.

E) Claim rejections - 35 U.S.C. § 103(a).

Claims 1-6 were rejected under 35 U.S.C. § 103(a) as being obvious over Nagai, in view of Voet (D. Voet and J.G. Voet, Biochemistry, 2nd edition, 1995, page 58).

The Examiner asserted that the compounds of Nagai differ from the compounds of the present invention in that the compounds of Nagai are S-S bridged, whereas the presently claimed compound of formula (I) is S-S-S bridged and Nagai discloses Ala/Val whereas the presently claimed compound of formula (II) discloses Val/Val. The Examiner asserted that one of ordinary skill in the art would readily have converted the S-S bridge of the Nagai compounds to an S-S-S

bridge in order to obtain a compound of the formula (I) because the bridges are structurally similar. The Examiner further asserted that one of ordinary skill in the art would readily have substituted a Val for the Ala of Nagai because this is a conservative substitution, both being non-polar amino acids as shown by Voet.

As the Examiner noted, compounds Q and R according to the present invention are different from compounds A to C of Nagai in the main cyclic structure. That is, compound Q has an -S-S-S- moiety and compound R has a valine. On the other hand, compounds A to C have an -S-S- moiety and an alanine, respectively, at the corresponding positions.

Seeing the structures of compounds A to C of Nagai, one skilled in the art would have considered these changes difficult to make. In fact, it is known that artificial change of the amino acid moiety of the cyclic peptide is difficult.

Thus, a disulfide bridge versus an S-S-S bridge and substitution of Ala with Val for purposes of obtaining a depsipeptide having anti-tumor properties are not considered substitutions of equivalent structures.

However, the present inventors unexpectedly found that merely by changing the medium, compounds having quite different structures (-S-S-S- or valine) could be obtained. Thus, the present invention is neither taught nor suggested by the cited references.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Patent Application No.: 10/525,717

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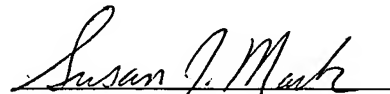
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